

Anatomical Variation of Zygomatic Nerve Branches Around Zygomaticus Major Muscle in Facelift

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INTRODUCTION: To improve the mid-facial soft tissue sagging, it is sometimes necessary to release the zygomatic and upper masseteric retaining ligaments in the sub-SMAS plane. Release of these ligaments needs to be done carefully to avoid any injuries to the branches of the facial nerve. Some of the zygomatic branches run towards the Zygomaticus major muscle are located deep to the fascia and passes deep under the third of the Zygomaticus major muscle.^{1,2} However, anatomical variation of the zygomatic branches were found. This is a case of the anatomic variation of the zygomatic branches seen unilaterally in a single patient undergoing facelift.

MATERIALS AND METHODS: A healthy 66 year old female patient underwent a facelift procedure.

RESULTS: After the zygomatic and upper masseteric retaining ligaments were released in the sub-SMAS plane, an anatomical variation of the zygomatic branches were identified lateral to the origin of the Zygomatic major muscle on the left side only. The branches penetrated from the deep fascia about 1 cm lateral to the origin of the zygomaticus major muscle; one ramus passed superficially above the upper third of the muscle. On the right side, this was not seen. The main zygomatic retaining ligaments are located immediately lateral to the origin of the zygomaticus major muscle. The zygomatic branches are usually located deep to the deep fascia in the lateral area of the muscle and passes deep under the third of the muscle. Therefore, the branches are protected while the retaining ligaments are dissected in the sub-SMAS plane. However, in this patient, the risk of the zygomatic branch injury is higher so blunt dissection, adequate vertical traction of the SMAS flap, and the use of tumescent solution are needed to visually differentiate between the retaining ligaments and the nerve branches to avoid any injury.³

CONCLUSION: we should be aware of this unique case where the variation was only seen unilaterally. Particular care must be taken when dissection is performed to release the retaining ligaments. We hope this case can contribute to avoid nerve injuries in facelift procedures.

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